## Abstract of the Disclosure

A media access control protocol for a network including sensor nodes connected to each by a single shared wireless communications channel executes the following protocol in each node so that network access is managed in a distributed manner. The node monitors the channel for a period of time equal to at least a length of a frame. A frame length is predetermined and depends on network conditions. The frame is partitioned into time slots. A particular time slot is marked as occupied if the channel has a carrier signal during the time slot and otherwise the time slot is marked as available. The node only transmits a packet during available time slots. The frame structure is updated on a periodic basis if a configuration of the network changes over time.